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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/687,212	10/16/2003	John T. Mariner	131966-2	7158

36580 7590 05/27/2005

GE SPECIALITY MATER
ONE PLASTICS AVENUE
PITTSFIELD, MA 01201

EXAMINER

PAIK, SANG YEOP

ART UNIT	PAPER NUMBER
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3742

DATE MAILED: 05/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/687,212

Applicant(s)

MARINER ET AL.

Examiner

Sang Y Paik

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 March 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Gilbert Sr (US 6,140,624).

Gilbert shows a heater including a graphite body (14) formed in an electrical pattern with terminal ends, a first coating layer (16) made of boron nitride encapsulating the graphite body, and a second continuous surface coating layer made of carbide formed over the heating surface formed by the coated graphite body. The first and second coating layers are formed by the chemical deposition process, and the electrical pattern of the graphite body forming the spiral and serpentine shape has been configured by the machining process. Gilbert also teaches that its graphite body is formed in the same manner as the claimed graphite body which is processed with a methane gas in a very high temperature. Thus the coated graphite body would inherently take the form of a solid layer as it is done with claimed graphite body.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. Claims 2-22 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gilbert Sr (US 6,140,624) in view of Miram (US 4,263,528).

Gilbert shows the heater and its method claimed except the first coating layer being applied prior to forming the electrical pattern in the graphite body.

Miram shows a graphite body that is coated with a boron nitride layer (24) prior to forming an electrical pattern thereon by the chemical etching process. Miram further shows that other similar layer of boron nitride such as tungsten or molybdenum can be alternative used. In view of Miram, it would have been obvious to one of ordinary skill in the art to apply the first boron nitride prior to forming the electrical pattern in the graphite body as an alternative process to effectively form such electrical pattern on the graphite body along with the coated boron nitride layer.

With respect to claim 8, it would have been obvious to one of ordinary skill in the art to use boron nitride or aluminum nitride in place of the carbide material of the second coating layer since the boron nitride and aluminum nitride are known to provide an good insulating properties as well as suitable radiation emissivity.

Response to Arguments

5. Applicant's arguments filed 3/14/05 have been fully considered but they are not persuasive.

The applicant argues Gilbert shows a pyrolytic boron nitride body or base with a coating layer of pyrolytic graphite, and there is no showing of the solid graphite body. This argument is not deemed persuasive since the coated layer of pyrolytic graphite shown as element 14 is produced in the same way as the claimed graphite body, i.e., in the high temperature with the

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methane gas, and that the coated layer takes the solid form which is then machined to form a continuous electrical strip. Thus the recited solid graphite body is clearly met by the graphite body of Gilbert.

With respect to Miram, the applicant argues the graphite layers are coating layers and not solid graphite body and that the graphite coatings are applied prior to forming an electrical pattern. The coating layers of graphite layers take the form a solid layer as Miram teaches that such layers form mechanically stable layers, and furthermore, the drawing figures clearly illustrate that such coating layers take the form solid layer. As the applicant contends, the coating layer such as element 21 is coated prior to the graphite layer forming the electrical flow path as claimed. The applicant argues that it would not have been obvious to combine the teachings of Miram with Gilbert because they are non-analogous art. This argument is not deemed persuasive since Miram is reasonably pertinent to the problem that the applicant was concerned of, i.e., the ways of forming an electrical flow path to a graphite body. Furthermore, Miram shows the chemical etching to form the electrical pattern which would have been an obvious alternative ways to form the electrical flow path in Gilbert.

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

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CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sang Y Paik whose telephone number is 571-272-4783. The examiner can normally be reached on M-F (9:00-4:00) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robin Evans can be reached on 571-272-4777. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

S. Paik

Sang Y Paik
Primary Examiner
Art Unit 3742

syp